A CASE REPORT OF A PREGNANT WOMAN INFECTED WITH INFLUENZA A (H1N1)

Ramesh B,1 Syed Gowzie Azher2, Devi Swapnie3, Bharathi B4, Chandra Shekar5, Ravindra Karikere6

1Professor, Department of General Medicine, ESIC MC & PGIMSR.
2Senior Resident, Department of Anaesthesia, ESIC MC & PGIMSR.
3Junior Resident, Department of Obstetrics & Gynaecology, ESIC MC & PGIMSR.
4Assistant Professor, Department of Obstetrics & Gynaecology, ESIC MC & PGIMSR.
5Assistant Professor, Department of Obstetrics & Gynaecology, ESIC MC & PGIMSR.
6Junior Resident, Department of Obstetrics & Gynaecology, ESIC MC & PGIMSR.

ABSTRACT

Pregnant women are more susceptible to influenza and pregnancy may enhance the severity of the illness. Pregnant women are a high-risk group for morbidity and mortality from influenza. We are reporting a case 27-year-old gravida 2, para 1, living 1 with 24 weeks pregnancy with H1N1 positive in respiratory failure, which was successfully treated in our hospital.

KEYWORDS

H1N1, Pregnancy, Influenza.


INTRODUCTION: Pregnant women constitute a high-risk group for disease-related morbidity and mortality.1 Pregnancy does not predispose women to an increased risk of acquiring influenza infection, but is a risk factor for lethal outcome.2-3 This is due to the changes in their immune systems to accommodate the developing foetus and adaptations in body as a result of the hormonal and physical changes.4 Other factors such as family commitments, lack of awareness, and gender discrimination have been identified to cause delay in seeking health care. These factors along with the physiological changes have an impact on outcome of H1N1 infected pregnant women in low income nations.5 There are also reports of an increased risk of miscarriage, birth defect, and preterm delivery when pregnancy is associated with influenza infection.6-7 H1N1 influenza broke out worldwide in 2009–2010.

CASE: A 27-year-old gravida 2, para 1, living 1 presented to emergency department with history of 6 months’ amenorrhoea, fever since 1 week, cough with breathlessness since 3 days.

On examination, her pulse rate is 100 bpm, blood pressure is 100/64 mmHg, respiratory rate is 32 cpm, oxygen saturation 90% with 5 L of oxygen and temperature 101 F. Bilateral coarse crepitations present. On per abdomen examination is uterus 24 weeks.

Patient was intubated, put in prone position and nasopharyngeal swab for H1N1 was sent. Empirically oseltamivir 75 mg BD was started. Antibiotics amoxicillin & clavulanic acid and levofloxacin was given. Obstetric scan was done following day and was diagnosed to have intrauterine foetal demise. Labour was induced with misoprostol and she was in labour. After 16 hrs., she expelled a dead foetus weighing 490 g. On Day 5, swab for H1N1 reported to be positive. Inj. methylprednisolone IV infusion @ 2 mg/hr was given. Infusion was given for six days.

On day 17, patient was extubated. Patient was reintubated as there was fall in saturation. Later, tracheostomy was done. Her condition gradually improved and discharged.

DISCUSSION: Influenza is a potentially serious infectious disease that causes yearly outbreaks of respiratory illness, which occur in people of any age worldwide and are most commonly seen during the winter months. Patients with H1N1 viral infection present with acute respiratory symptoms—dry cough, sore throat, nasal congestion, and fever. Almost one third of them report contact with an ill individual on admission.8

Pregnancy has been a risk factor for increased illness and death for pandemic influenza. Pregnant women generally are at higher risk for influenza-associated morbidity and mortality compared with women who are not pregnant. A study comparing hospital admissions for pregnant women during influenza season to the year before they were pregnant found that pregnant women were up to five times more likely to be admitted for a respiratory illness.1

The increased risk of complications is thought to be related to physiologic changes that occur during pregnancy.4 Several changes occur in cardiovascular and respiratory systems, including increased heart rate, stroke volume, oxygen consumption, and decreased lung capacity during pregnancy.9 Relevant immunologic alterations also occur during pregnancy, with a shift away from cell-mediated immunity toward humoral immunity.

The CDC recommends that clinicians use nasopharyngeal swabs for rapid detection of antigens for influenza A and B in patients with fever and respiratory
symptoms. If an unsubtypable influenza A virus infection is found, the specimen should be sent to a state public health laboratory for additional testing to identify H1N1 virus using the real-time PCR technique which is currently recommended for laboratory confirmation of H1N1 viral infection\[10\] antiviral therapy should be started as soon as possible based only on clinical presentation of fever and sore throat or cough without waiting to obtain results of laboratory testing, unless another cause of symptoms is reasonably suspected.\[31\] It is recommended to treat severe cases of H1N1 infection in a hospital using respiratory support with supplemental oxygen and mechanical ventilation as required. Antibiotic supplementation should be guided by the presence of pneumonia depending on the patterns of resistance in the region.\[12\]

The antiviral medications most widely used during pregnancy are the neuraminidase inhibitors oseltamivir, which act as an important adjunct to immunisation. It works most effectively early in the course of illness (within 12 hours), and should ideally be started within 24–48 hours of the onset of symptoms. The antiviral medication is not routinely recommended for people at low risk of complications from seasonal influenza as it is unclear if there is a benefit in this population. However, in cases of moderate or severe disease, and in high-risk populations (including pregnant women), antivirals are recommended.\[13,14\] Patients who treated with antiviral medication after 48 hours were more severe than those who used the drug in 48 hours.\[15-17\] Early intervention and antiviral therapy is the key to reduce the chance in to ICU and the mortality of pregnant women.\[18,19\] There are some studies which have shown that administration of systematic corticosteroids associated with reduced pulmonary inflammation in patients with pneumonia.\[20,21\] According to Le et al, hydrocortisone will decrease the inflammatory response significantly. Retrospective study conducted by the Garcia Vidal et al found mortality decrease in patients who receive corticosteroids in pneumonia.\[21\]

The available evidence suggests that transplacental transmission is rare and viremia is infrequent.\[19,20\] However, some studies have documented pregnancy loss and adverse foetal effects among women with both seasonal and pandemic influenza during pregnancy.

**CONCLUSION:** H1N1 influenza in pregnancy can be associated with severe mortality and morbidity. If vaccination is available, it has to be given in time, prompt diagnosis, and adequate treatment with antiviral medications, systemic corticosteroids to be given as and when it is required to prevent the mortality and morbidity, this is practice of administrating.

Steroid is still relatively frequent with physician having to make the decision to use this drug at his discretion, still some more cases need to prove the use of corticosteroid in H1N1.

**REFERENCES:**


